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REMARKS

This amendment, Paper No. 8, is submitted in response to the Official Action, Paper No. 7, dated July 2, 2003. Due to a restriction requirement, only claims 1-25 were considered on the merits of the Official Action. Claims 26-52 are withdrawn.

The Specification

The specification has been amended, at Pages 5 and 6 to clarify optional use of a seal-enhancing mechanism.

The specification has been amended, at Page 6, per Examiner's suggestion, with respect to a reference to Figure 6B, being changed to refer to 6G.

In addition, the Abstract has been amended to remove language such as, "said" and "means" per Examiner's requirement.

No new matter has been added.

The Drawings

The drawings have not been amended at this time.

The Claims

Several claims have been amended, some to overcome Examiner's objections to the claims, some simply to clarify the language of the claims.

In addition, claims 1 and 16 have been amended to include language that the coupler of the present invention is used for coupling "drainage" conduit, per one of Examiner's suggestions in a telephonic discussion with Examiner on 26 June 2003.

Claim Objections

Applicant has amended claim 1 to insert "said" before "coupler" at line 8.

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Applicant has amended claim 9 to recite "coupling members" as opposed to "coupling member" at line 3, and has corrected the spelling of "compressible" at line 3.

Applicant has amended claim 22 to recite "coupling members" as opposed to "coupling member" at line 3, and has corrected the spelling of "compressible" at line 3.

With respect to Examiner's suggestions regarding "the walls" in claim 2 line 2, claim 3 line 2, claim 12 line 2, claim 13 line 2 and claim 16 lines 8 and 9, Applicant has amended the claims to simply recite "corrugations formed in" the arcuate coupling members, in order to clarify the claim language, thus accomplishing Examiner's suggestion.

In addition, with respect to Examiner's suggestion regarding "of corrugated conduit if corrugated conduit is being connected" in claim 16 lines 10-11, and which also applies to claims 2, 3, 12, 13, 14, 15, and 25, the claims have been amended to recite simply "corrugated conduit" or "perforated corrugated conduit". The amended claims now read more concisely, as Examiner was suggesting, and further eliminate redundant language. The "being connected" language was deleted because it was unnecessary. The invention is a coupler for coupling conduit so of course conduit is being connected. Thus, the claims as amended have accomplished Examiner's suggestions, and expanded thereon to reduce redundancy.

Finally, with respect to Examiner's suggestion regarding replacing "at least one corrugation" with "respective corrugations", in claim 2 line 3, claim 3 line 3, and claim 16 line lines 10-11, Applicants have not amended this language. The arcuate coupling members could be aligned towards the end of a corrugated conduit such that the corrugations in the arcuate coupling members could align/interfit/engage with more than one corrugation of the corrugated conduit being coupled. But, it is also possible, (as can be seen from the drawings and description) depending on: the size of the coupler; how and where it is located/installed; and how many corrugations there are formed in the arcuate coupling member; that the coupler might only engage with one (for example, the very last) corrugation of one or both conduits

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being coupled. The coupling member is not required to interfit necessarily with multiple or "respective corrugations". Thus, the claims recite only that the corrugation(s) of the arcuate coupling member interfit with at least one corrugation. In addition, such that the claims are consistent, claims 2, 3, and 16 have been amended to recite "at least one corrugation" as well. Thus, the claims are all consistent in the language used to describe the option of at least one corrugation on the arcuate coupling members interfittable with at least one corrugation on corrugated conduit.

No new matter has been added by the amendments to address Examiner's objections. The claim language has simply been clarified and made more concise.

35 USC § 102(b)

Claims 1-5, 8, 16-18 and 21 stand rejected under 35 USC § 102(b) as being anticipated by US Patent No. 4,440,425 to Pate et al.

With respect to claim 1, and with particular reference to Figures 6, and 7, Examiner asserts that Pate et al. disclose a coupler (their ref. 81 – connector sleeve) for coupling conduit comprising: a first arcuate coupling member (their 84 – semi cylindrical part) and a second arcuate coupling member (their 86 – semi cylindrical part) hingedly attached each to one end of the other at a hinge region (their 88 – hinge portion); a first cooperating attaching component (their 94 - flexible strap) attached to an outer end of the first coupling member opposite said hinge region; and a second cooperating attaching component (their 90 – engaging block) attached to an outer end of said second coupling member opposite said hinge region; and wherein said coupler is wrappable around adjacent ends of aligned conduit and said first and said second components are attachable each to the other, thereby closing said coupler and securing the adjacent ends of aligned conduit together in fluid flow communication.

Applicants traverse the rejection, and respectfully request reexamination and reconsideration of the claims, as amended, and based on the arguments below. First, Pate et

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al.'s invention is not intended or used for fluid flow at all. In fact, Pate et al. must do just the opposite. The Pate et al. invention is a conduit and connector for conveying electrical service cables and wires. It's a protective tube through which wires and cables are run, specifically to be protected from liquid. Applicant claims, as amended, a "drainage" conduit through which liquid flows, not through which dry wires and cables are run. The Pate et al. invention specifically can not have fluid flow therethrough because the wires and cables which run through their conduit and connectors must remain dry. In fact, keeping wires and cables dry is one of the main purposes of Pate et al.'s invention of a conduit through which wires can run to keep them safe, dry, and protected from corrosion.

Secondly, Pate et al. is required to be corrugated. Pate et al. disclose and teach *only* a corrugated conduit specifically because they need a flexible conduit that can be bent. See column 5, lines 33-48 and 59-66. See also all Figures of Pate et al. In addition, all varieties of clamping, closing and coupling means of Pate et al. are corrugated at least on the inside, or they are threaded. Applicant does not require either that the coupler be corrugated or that any of the closing means be corrugated. Thus, Pate et al. contains an additional element not required by the present invention. The coupler of the present invention, as claimed in claim 1, is not corrugated.

Therefore, because Applicant's invention is a fluid-carrying drainage coupler, and Pate et al. is specifically designed to exclude fluid, Pate et al. does not disclose all of the elements of the present invention. In addition, Pate et al. requires elements that the present invention does not. Pate et al. must be corrugated. The present invention is not required to be corrugated. Therefore, because Pate et al. does not disclose all of the elements of the claimed invention, the rejection has been overcome and Applicant respectfully requests withdrawal of the rejection.

With respect to claim 2, Examiner asserts that wherein the first coupling member comprises a plurality of corrugations in walls of the first coupling member, said corrugations

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located and spaced to fit within and mate or interfit with respective corrugations of corrugated conduit. Examiner refers to Pate et al. column 9, lines 41-46 and column 10, lines 53-59.

Applicant respectfully traverses this rejection. Claim 1, as amended, is not anticipated by Pate et al. in part because Pate et al. is not a coupler for drainage conduit, and in fact specifically does not carry any liquid. Therefore, because claim 2 is dependent on a base claim that is not anticipated by the cited reference, claim 2, adding optional corrugations, is also not anticipated by the cited reference. Therefore, Applicant respectfully requests withdrawal of the rejection.

With respect to claim 3, Examiner asserts that wherein the second coupling member comprises a plurality of corrugations in walls of the second coupling member, said corrugations located and spaced to fit within and mate or interfit with respective corrugations of corrugated conduit. Examiner refers to Pate et al. column 9, lines 41-46 and column 10, lines 53-59.

Applicant respectfully traverses the rejection. Pate et al. does not carry liquid. Therefore, because claim 3 is dependent on a base claim that is not anticipated by the cited reference, claim 3, adding optional corrugations, is also not anticipated by the cited reference. Therefore, Applicant respectfully requests withdrawal of the rejection.

With respect to claim 4, Examiner asserts that wherein the first component comprises a plurality of ridges. Examiner refers to Pate Figure 6.

Applicant respectfully traverses the rejection. Claim 1, as amended, is not anticipated by Pate et al. in part because Pate et al. is not a coupler for drainage conduit, and in fact specifically does not carry any liquid, and indeed protects against the wires contained therein from contacting liquid. Therefore, because claim 4 is dependent on a base claim that is not anticipated by the cited reference, claim 4, adding a means by which the coupler of the present

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invention is secured closed, is also not anticipated by the cited reference. Therefore, Applicant respectfully requests withdrawal of the rejection.

With respect to claim 5, Examiner asserts that wherein the second component comprises a plurality of detents which cooperate with the ridges of the first component to close and secure the coupler in a closed position.

Applicant respectfully traverses the rejection. Claim 1, as amended, is not anticipated by Pate et al. in part because Pate et al. is not a coupler for drainage conduit, and in fact specifically does not carry any liquid, and indeed protects against the wires contained therein from contacting liquid. Therefore, because claim 5 is dependent on a base claim that is not anticipated by the cited reference, claim 5, adding a cooperating means by which the coupler of the present invention is secured closed, is also not anticipated by the cited reference. Therefore, Applicant respectfully requests withdrawal of the rejection.

With respect to claim 8, Examiner asserts that wherein the inside diameter of said coupler is about equal to or slightly greater than the outside diameter of the conduit being coupled.

Applicant respectfully traverses the rejection. Claim 1, as amended, is not anticipated by Pate et al. in part because Pate et al. is not a coupler for drainage conduit, and in fact specifically does not carry any liquid, and indeed protects against the wires contained therein from contacting liquid. Therefore, because claim 8 is dependent on a base claim that is not anticipated by the cited reference, claim 8, adding a definition of how the present coupler is sized to fit around drainage conduit, is also not anticipated by the cited reference. Therefore, Applicant respectfully requests withdrawal of the rejection.

With respect to claim 16, Examiner asserts, with particular reference to Pate Figures 6 and 7, that Pate discloses a coupler (their 81) for coupling conduit comprising: a first arcuate

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coupling member (their 84) and a second arcuate coupling member (their 86) hingedly attached each to one end of the other at a hinge region (their 88); a first cooperating attaching component (their 94) attached to an outer end of the first coupling member opposite said hinge region; and a second cooperating attaching component (their 90) attached to an outer end of said second coupling member opposite said hinge region; a plurality of corrugations in a wall of said first coupling member, and a plurality of corrugations in a wall of said second coupling member, said corrugations of said coupling members located and spaced to fit within and mate or interfit with respective corrugations of the corrugated conduit being connected; and wherein said coupler is wrappable around adjacent ends of aligned conduit and said first and said second components are attachable each to the other, thereby closing said coupler and securing the adjacent ends of aligned conduit together in fluid flow communication.

Applicants traverse the rejection, and respectfully request reexamination and reconsideration of Claim 16, as amended, and based on the arguments below. First, as noted in the argument for the rejection of Claim 1, Pate et al.'s invention is not intended or used for fluid flow at all. In fact, Pate et al. must do just the opposite. The Pate et al. invention is a conduit and connector for conveying electrical service cables and wires. It's a protective tube through which wires and cables are run, specifically to be protected from liquid. Applicant claims, as amended, a "drainage" conduit through which liquid flows, not through which dry wires and cables are run. The Pate et al. invention specifically can not have fluid flow therethrough because the wires and cables which run through their conduit and connectors must remain dry. In fact, keeping wires and cables dry is one of the main purposes of Pate et al.'s invention of a conduit through which wires can run to keep them safe, dry, and protected from corrosion.

Therefore, because Applicant's invention is a fluid-carrying drainage coupler, and Pate et al. is specifically designed to exclude fluid, Pate et al. does not disclose all of the elements of the present invention. Therefore, because Pate et al. does not disclose all of the elements of

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the claimed invention, the rejection has been overcome and Applicant respectfully requests withdrawal of the rejection.

With respect to claim 17, Examiner asserts that wherein the first component comprises a plurality of ridges. Examiner refers to Pate et al. Figure 6.

Applicant respectfully traverses the rejection. Claim 16, as amended, is not anticipated by Pate et al. in part because Pate et al. is not a coupler for drainage conduit, in fact specifically does not carry any liquid, and indeed protects against the wires contained therein from contacting liquid. Therefore, because claim 17 is dependent on a base claim that is not anticipated by the cited reference, claim 17, adding a means by which the coupler of the present invention is secured closed, is also not anticipated by the cited reference. Therefore, Applicant respectfully requests withdrawal of the rejection.

With respect to claim 18, Examiner asserts that wherein the second component comprises a plurality of détents which cooperate with the ridges of the first component to close and secure the coupler in a closed position.

Applicant respectfully traverses the rejection. Claim 16, as amended, is not anticipated by Pate et al. in part because Pate et al. is not a coupler for drainage conduit, and in fact specifically does not carry any liquid, and indeed protects against the wires contained therein from contacting liquid. Therefore, because claim 18 is dependent on a base claim that is not anticipated by the cited reference, claim 18, adding a cooperating means by which the coupler of the present invention is secured closed, is also not anticipated by the cited reference. Therefore, Applicant respectfully requests withdrawal of the rejection.

With respect to claim 21, Examiner asserts that wherein the inside diameter of said coupler is about equal to or slightly greater than the outside diameter of the conduit being coupled.



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Applicant respectfully traverses the rejection. Claim 16, as amended, is not anticipated by Pate et al. in part because Pate et al. is not a coupler for drainage conduit, and in fact specifically does not carry any liquid, and indeed protects against the wires contained therein from contacting liquid. Therefore, because claim 21 is dependent on a base claim that is not anticipated by the cited reference, claim 21, adding a definition of how the present coupler is sized to fit around drainage conduit, is also not anticipated by the cited reference. Therefore, Applicant respectfully requests withdrawal of the rejection.

No new matter has been added in the claim amendments.

35 USC § 103(a)

Claims 1, 9, 16, and 22 stand rejected under 35 USC § 103(a) as being unpatentable over Hattori et al. (US 4,871,198) in view of Pate et al. (US 4,440,425).

With respect to claims 1 and 16, and with particular reference to Figure 2 (of Hattori), Examiner asserts that Hattori et al. discloses a coupler for coupling conduit (Hattori's 2 and 3) comprising: a first arcuate coupling member (one half of Hattori's 7) and a second arcuate coupling member (other half of 7) attached each to one end of the other via tie bolts (6); a plurality of corrugations in a wall of said first coupling member, and a plurality of corrugations in a wall of said second coupling member, said corrugations of said coupling members located and spaced to fit within and mate or interfit with respective corrugations of the corrugated conduit being connected (Hattori Fig. 2); and wherein said coupler is wrappable around adjacent ends of aligned conduit and said first and said second components are attachable each to the other, thereby closing said coupler and securing the adjacent ends of aligned conduit together in fluid flow communication.

Examiner asserts that Hattori et al. differs from the claimed invention in the manner in which each coupling half is attached to the other. Hattori et al. relies on tie bolts for a detachable connection. However, Examiner asserts that Pate et al. teaches a coupler for

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corrugated conduit comprising: a first arcuate coupling member (Pate et al.'s 84) and a second arcuate coupling member (Pate et al.'s 86) hingedly attached each to one end of the other at a hinge region (Pate et al.'s 88); a first cooperating attaching component (Pate et al.'s 94) attached to an outer end of the first coupling member opposite said hinge region; and a second cooperating attaching component (Pate et al.'s 90) attached to an outer end of said second coupling member opposite said hinge region.

Examiner asserts that in view of Pate et al.'s teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hattori et al. to include a hinged connection instead of a bolted on in order to allow faster attachment and detachment of the coupler.

Applicant traverses the rejections and respectfully requests reexamination and reconsideration of the claims, as amended and based on the arguments below.

With respect to claims 1 and 16, Applicant respectfully disagrees with Examiner's assessment. Hattori et al. disclose a multi-part joining device that requires an outer coupling member and a packing member arranged inside the outer coupling member. The packing member is made of a rubber type material. See Hattori et al. abstract. There is no teaching whatsoever in Hattori et al. about not using such a rubber packing material. They require it for a good seal and it is what the outer coupling member is clamped around. As shown in the Examples, they go to great detail in experimenting with and explaining the effects of different packing materials. Applicant requires no such rubber material packed between the conduits to be coupled and the coupling device. Thus, even if Hattori et al. were modified so that the bolted clamp connecting their outer clamping coupling member were changed to a means such as that disclosed in Pate et al., Applicant's invention would not result. Applicant simply requires no rubber inner packing material as is required by Hattori et al.

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Also, there is nothing in Pate et al. that indicates that the ratchet action connection of Figures 6 and 7, referred to by Examiner, is detachable. Therefore, even if Hattori et al. were modified to include the hinged connection of Pate et al. it would not allow faster attachment and detachment of the coupler. In fact, it would appear to prevent detachment of the coupler aside from cutting it off.

Secondly, with respect to Applicant's claim 1, neither Hattori et al. nor Pate et al. disclose or teach anything about having a non-corrugated coupler to couple non-corrugated conduit. Applicant's claim 1 does not require corrugations and Applicant's invention can connect corrugated or non-corrugated conduit. Nothing in Hattori et al. or Pate et al. teaches anything to one of ordinary skill in the art about how to connect non-corrugated conduit. Both Hattori et al. and Pate et al. require corrugated conduit. Thus, Applicant's claim 1, which does not claim corrugations, is not taught or suggested in any way by either Hattori et al. or Pate et al.

With respect to claims 9 and 22, Examiner asserts that Hattori et al. disclose an elastic material (Hattori's 4) disposed on the interior surface of each said first and second coupling members, said elastic material being compressible against the outer surface of the conduits being coupled, to enhance the seal made by the coupler.

Applicant respectfully disagrees with Examiner's assessment. What Examiner calls "an elastic material" of Hattori is actually a thick packing material as shown in Figure 2. See also Column 2, starting at line 33, wherein the packing material has corrugations on its inner surface to match a corrugated conduit, and corrugations on the outer surface to match the corrugations on the inner surface of the coupling member. As noted at Page 5, line 25-26 and Page 6, lines 16-17, as amended, Applicant's "elastic material" is simply a thin layer, or perhaps a ring structure such as an O-Ring type structure one would use to provide pressure for a good seal. It is not the thick packing material of Hattori et al. through which the conduit is inserted and which is corrugated to be packed between the conduit and the coupler. Applicant's "elastic material" is simply not the thick "packing member" of Hattori et al.

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Claims 6, 7, 19 and 20 stand rejected under 35 USC § 103(a) as being unpatentable over Pate et al. (US 4,440,425).

With respect to these claims, Examiner asserts that Pate et al. are silent as to whether their first and second cooperating attaching components are irreversibly attachable or detachable from one another once attached. Nevertheless, Examiner asserts that it would have been an obvious design choice to employ either irreversibly attachable components or readily detachable components in Pate depending on the application for which Pate's coupling is used.

Further, Examiner took official notice of the common and widespread use of attaching components of the type disclosed by Pate et al. that are irreversibly attachable, and attaching components of the type disclosed by Pate et al. that are readily detachable.

With respect to these claims, Applicant agrees, Pate et al. is silent as to the reversibility of their various coupling methods. However, while there are various reversible and irreversible methods of closing clamps, Applicant's reversible and irreversible variations are dependent claims based on independent claims 1 and 16 which should now be allowable as amended and based on the arguments presented above to overcome the 103(a) rejections of claims 1 and 16. Thus, claims 6, 7, 19 and 20 are also allowable.

Claims 10 and 23 stand rejected under 35 USC § 103(a) as being unpatentable over Pate et al. (US 4,440,425).

Examiner took official notice of the use of a bump or ridge of the type claimed in claims 10 and 23 for regulating the amount of flex permitted of an attaching component. And Examiner considers it obvious to one having ordinary skill in the art at the time the invention was made to modify Pate's first attaching component with a bump or ridge in order to prevent the component from detaching from the first coupling member.

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Applicant respectfully disagrees. Pate et al. teaches absolutely nothing about having any sort of bump, dent, ridge or dip to regulate anything about how far the toothed end portions (for example 94 and 96 of Figures 6, and 7) can be bent. And the various other embodiments of Pate et al. do not even have any such attaching portions that even could be bent or require any sort of protection against bending too far. In fact, most of Pate et al.'s embodiments could not even use such a device because there are no parts that could have such a device thereon. Therefore there is no need, thus no suggestion or teaching whatsoever, in Pate et al. regarding even needing, much less using, any sort of bend-stopping mechanism. Therefore, it would not have been obvious to modify Pate's first attaching component with a bump or ridge, because there is no need for such a device. Furthermore, claims 10 and 23 depend from now-allowable base claims 1 and 16 and are thus also allowable.

Claims 11 and 24 stand rejected under 35 USC § 103(a) as being unpatentable over Pate et al. (US 4,440,425).

Examiner took official notice of the use of a bump or ridge of the type claimed in claims 11 and 24 for regulating the amount of flex permitted at a hinge. And Examiner considers it obvious to one having ordinary skill in the art at the time the invention was made to modify Pate's hinge with a bump or ridge in order to prevent the hinge from being bent to the point that it snaps or breaks or to reduce the stress concentration at the hinge that will arise from repeated use thereby increasing the longevity of the hinge and thus the coupler itself.

Applicant respectfully disagrees with Examiner's official notice of using a flex-limiting device with Pate et al. There is no teaching or suggestion whatsoever in Pate et al. for even contemplating such a device. Furthermore, claims 11 and 24 depend from now-allowable base claims 1 and 16, and thus are also allowable.

No new matter has been added.

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Allowable Subject Matter

Claims 12 – 15 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if re-written in independent form including all of the limitations of the base claim and any intervening claims. Thus, the allowability of claims 12 –15 and 25 is contingent on overcoming the rejections to claims 1-3 and 16 respectively.

Applicant appreciates Examiner's indication of allowable subject matter. Applicant has at this time, amended the base claims 1 and 16 to include language indicating that the conduit coupler of the present invention couples drainage conduit, per Examiner's suggestion, and has also amended claims 2 and 3. Applicant has also amended several other claims to accomplish Examiner's suggestions. Applicant has also presented explanation and argument in connection with the amendments to claims 1, 2, 3, and 16 to overcome the rejections of these claims. Therefore, Applicant, in responding to this first Official Action has not re-written claims 12-15 and 25 at this time. Applicant respectfully requests reexamination and reconsideration of the base claims, and all other claims, as amended, and is willing to work with Examiner and any suggestions Examiner has, towards allowance of the claims.

No new matter has been added in the claim amendments.

Conclusion

Applicant has amended the specification, abstract and many claims, in response to Examiner's suggestions of claim language, and has overcome the objections to and rejections of the claims. Applicant maintains that the claims are allowable. Therefore, Applicant respectfully requests reconsideration of the Application, and withdrawal of the rejections such that the application is now in condition for allowance. Any fees due in connection with this response are included herewith.

In Re: Application of: Presby, David, W.  
Means For Coupling Conduit

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Ser. No. 09/982,507

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Respectfully submitted,



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